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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/853,940

05/10/2001

Peter J. Janssen

US 010236

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24737

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06/14/2004

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

ABDULSELAM, ABBAS I

ART UNIT

PAPER NUMBER

2674

13

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/853,940

Applicant(s)

JANSSEN ET AL.

Examiner

Abbas I Abdulsalam

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments, see # 6, filed 08/25/03, with respect to the rejection(s) of claim(s) 1-20 under U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hanmura et al. (USPN 4481511).

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Rindal (USPN 6456281) in view of Hanmura et al. (USPN 4481511).

Regarding claims 1, 8 and 12, Rindal teaches a matrix display device (200) including MxN addressable elements, or pixels (250) driven by two drivers (210r, 210c) whose signals are fed with display conductors (240). Rindal discloses that the drivers generate signals controlled by the control unit (205) and shows the details of the display device (200), arranged in a rectangular format containing N electrically conductive lines (270), columns; and M electrically conductive lines, (260) rows. See col. 6, lines 37-63 and Fig 2. Rindal teaches that the display elements may be of various types including Liquid crystal cells and shows the breaking of the column

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conductor (770) and display conductor (740) into a number of sub-cell units. Col. 1, lines 23-30 and Fig 27. In addition, Rindal teaches a load driver (715) in terms of the display conductor and the column conductor and also teaches a voltage differential that must be driven on the column conductors to activate the display pixels. See Fig 24 and col. 19, lines 9-29. Rindal does not disclose "a partitioning means for dividing each of plurality of cells associated with a unique LCD column into a plurality of partitions aligned in the column direction, the respective partitions of said unique LCD column being associated with mutually exclusive groups of rows such that display cells in a given partition associated with said unique LCD column are associated with a first group of said plurality of rows, and the display cells in a different partition associated with said unique LCD column are associated with a different group of said plurality of row conductors".

Hanmura on the other hand teaches the number of column electrodes being divided four times the number of row electrodes to define four rows of picture cells (col. 4, lines 8-16), and discloses as shown in Fig. 6 a matrix display system with a 2J output lines in order that A-column electrodes, Y.sub.AJ and B-column electrodes Y.sub.BJ are driven. Hanmura teaches a double matrix system in which all of the column electrodes are driven from the same side of the substrate. That is, the terminals of the A-column electrodes Y.sub.A1-Y.sub.AJ and the B-column electrodes Y.sub.B1 -Y.sub.BJ are arranged on one side of the substrate with the A-column electrodes and the B-column electrodes being alternately arranged in the order such as Y.sub.A1, Y.sub.B1, Y.sub.A2, Y.sub.B2, . . . Y.sub.AJ, Y.sub.BJ. Hanmura further teaches that the 2J column electrode drive signals at the outputs of the modulator (103) of the column

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electrode driver (10) are applied to the 2J column electrodes without changing the order. See col. 6, lines 21-32.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rindal's matrix display device to adapt Hanmura's technique of dividing each column of column electrodes as shown in Fig. 6. One would have been motivated in view of the suggestion in Hanmura that dividing each column of column electrodes as illustrated in Fig. 6 produces identical structure as the desired "partitioning means". The use of dividing each column of column electrodes helps function a matrix display system as taught by Hanmura.

Regarding claims 2 and 14, Rindal teaches that each row (760) may be tapped off of a display conductor (840) which was driven at each end by a display driver (805) and (810). See Fig 23.

Regarding claims 3-4, 15-16, 17 and 19, Rindal teaches the row-coupled pixels which are driven by multiple row drivers (DX1, DX2), coupled respectively plural ends of the row conductive element (2200). See Fig 13 and col. 11, lines 48-50.

Regarding claims 5, 13 and 20, Rindal teaches the use of display conductor (740) with respect to the selection of row and the driving of new pulse train in parallel on columns (1080). See Fig 28.

Regarding claims 6-7 and 18, Rindal teaches a breaking of the column conductor (770) and the display conductor (740) into a number of sub-cells. See Fig 27.

Regarding claim 9, Rindal teaches the use of a load driver (715) and memory (VRAM) with respect to the display system. See Fig 24.

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Regarding claim 10, Rindal teaches enabling pixels by activating a plurality of row and column drivers in a sequential manner. Col. 2, lines 28-30.

Regarding claim 11, Rindal teaches the method of calculating current required with respect to drivers (715, 725) within the constraints of the display timing. See col. 22, lines 13-16.

### Conclusion

3. The prior art made of record and not relied upon is considered to applicant's disclosure. The following arts are cited for further reference.

U.S. Pat. No. 6,489,938 to Ito

U.S. Pat. No. 6,421,033 to Williams

U.S. Pat. No. 6,304,239 to McKnight

4. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abduselam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

**Any response to this action should be mailed to:**

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Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to:

**(703) 872-9314**

Hand delivered responses should be brought to Crystal Park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.

Abbas Abdulsalam

Examiner

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June 9, 2004

  
**XIAO WU**  
**PRIMARY EXAMINER**